



Challenges in converting an interviewer-administered food probe database to self-administration in the ASA24

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Automated Self-administered 24-Hour Recall (ASA24)

Goal

To create a fully auto-coded, self-administered 24-hour dietary recall interview based on the AMPM



Databases

- USDA Automated Multiple Pass Method software (AMPM)
 - Probes and responses to collect 24HR
- USDA Food and Nutrient Database for Dietary Studies, Version 1.0 (FNDDS)
 - Application developed by Westat to search and view food code information from FNDDS
- Food Intake Recording Software System (FIRSt) portion photographs (Baylor College of Medicine)
 - Supplemented with additional photographs for ASA24



Approach

1. Map question paths
2. Assign FNDDS food code to each path
3. Assign FNDDS portion codes to each portion path
4. Assign photograph to portion codes



Challenges

Self-administered interview

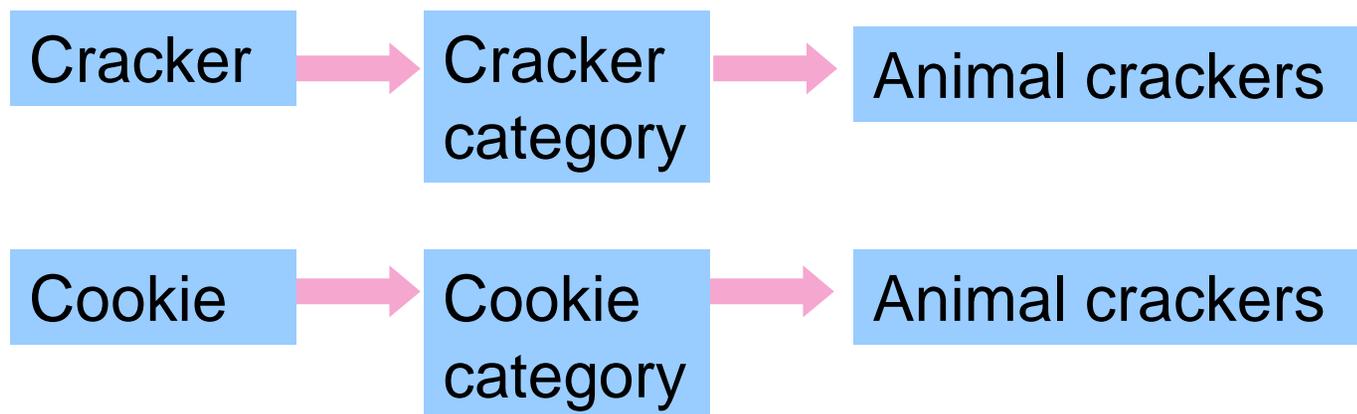
Auto-coded recall



Self-administration challenges

1. ASA24 food list terms must be unique

AMPM



ASA24





Self-administration challenges

2. ASA24 food list terms need to be phrased for effective searching

AMPM

Bottled water

Spring water

Tap water

ASA24

Water (bottled)

Water (spring)

Water (tap)



Self-administration challenges

- 3. ASA24 food list terms need to be organized for browsing

AMPM

126 categories

Beef, lamb, veal,
game meats

ASA24

24 Food groups

245 Sub-groups

Meats

Beef
Hamburger
Other



Self-administration challenges

4. ASA24 food list terms need to be more descriptive

AMPM

Hamburger

Plain patty

Meat

Sandwich

Burger

ASA24

Hamburger
(no bread or bun)

Meat

Hamburger
(on bread or bun)

Burger



Auto-coding challenges

1. Every path in ASA24 must result in a food code

AMPM

Black beans
and rice



Black beans, Cuban style

Spanish rice

ASA24

Beans and rice



Auto-coding challenges

2. ASA24 portions must be part of the food code

What kind of doughnut was it?



Jelly



Food code:
doughnut, jelly

How much did you actually eat?



1



Portion code:
1 doughnut

What was the size of the doughnut?



Large





Auto-coding challenges

3. ASA24 portions must be represented by photographs (example 1)

Pound cake



Small



Medium



Large



Auto-coding challenges

3. ASA24 portions must be represented by photographs (example 2)

Food	FNDDS portion description	Gm Wt
Pork chop	1 medium (5.5 oz, with bone, raw, yield after cooking, bone removed)	87

Photograph

1 medium pork chop, cooked, with bone, raw weight = 5.5 oz



Resulting database

23	Food groups
237	Food subgroups
7000	Food list terms
325	Detail questions
4100	Food codes
4400	Photographs and counting!